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# Global temperature 2008: Another top-ten year

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2008 is set to be cooler globally than recent years say Met Office and University of East Anglia climate scientists, but is still forecast to be one of the top-ten warmest years.

Each January the Met Office, in conjunction with the University of East Anglia, issues a forecast of the global surface temperature for the coming year. The forecast takes into account known contributing factors, such as El Niño and La Niña, increasing greenhouse gas concentrations, the cooling influences of industrial aerosol particles, solar effects and natural variations of the oceans.

## Met Office forecast for global temperature for 2008

Global temperature for 2008 is expected to be 0.37 °C above the long-term (1961-1990) average of 14.0 °C, the coolest year since 2000, when the value was 0.24 °C.

For 2008, the development of a strong La Niña in the tropical Pacific Ocean will limit the warming trend of the global climate. During La Niña, cold waters upwell to cool large areas of the ocean and land surface temperatures. The forecast includes for the first time a new decadal forecast using a climate model. This indicates that the current La Niña event will weaken only slowly through 2008, disappearing by the end of the year.

Prof. Chris Folland from the Met Office Hadley Centre said: "Phenomena such as El Niño and La Niña have a significant influence on global surface temperature and the current strong La Niña will act to limit temperatures in 2008. However, mean temperature is still expected to be significantly warmer than in 2000, when a similar strength La Niña pegged temperatures to 0.24 °C above the 1961-90 average. Sharply renewed warming is likely once La Niña declines."

These cyclical influences can mask underlying warming trends with Prof. Phil Jones, Director of the Climatic Research Unit, University of East Anglia, saying: "The fact that 2008 is forecast to be cooler than any of the last seven years (and that 2007 did not break the record warmth set on 1998) does not mean that global warming has gone away. What matters is the underlying rate of warming - the period 2001-2007 with an average of 0.44 °C above the 1961-90 average was 0.21 °C warmer than corresponding values for the period 1991-2000."

**Notes to editors**:

- The Met Office Hadley Centre is the UK's foremost centre for climate change research. Partly funded by Defra (the Department for Environment, Food and Rural Affairs) and the Ministry of Defence.
- The Met Office, in collaboration with the University of East Anglia, maintains a global temperature record which is used in the reports of the Intergovernmental Panel on Climate Change.
- The forecast value for 2008 mean temperature is considered indistinguishable from any of the years 2001-7, given the uncertainties in the data.
- It is most unlikely that 2008 will be as warm as or warmer than the current warmest year of 1998, which was 0.52 °C above the long-term 1961-1990 average because it was dominated by an extreme El Niño.
- Over the eight years, 2000-2007, since the Met Office has issued forecasts of annual global temperature, the mean value of the forecast error was just 0.07 °C.
- The first Met Office decadal forecast to 2014 was issued in 2007.
- Interannual variations of global surface temperature are strongly affected by the warming influences of El Niño events the cooling influences of La Niña events. The year 2007, with a provisionally assessed temperature of 0.41 °C (above long-term average), was colder than forecast. This was due to a much quicker than expected decline of a moderate El Niño that warms the climate, followed by the development of the strong cooling influence of the current La Niña.
- The current La Niña event is now the strongest since 1999-2000. The lag between La Niña and the full global surface temperature response means that the cooling effect of La Niña is expected to be a little greater in 2008 than it was during 2007.

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